

**Notice of Allowability**

Application No.

09/738,649

Examiner

Charles A Harkness

Applicant(s)

ROTH ET AL

Art Unit

2183

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to an amendment filed on 6 January 2005.
2. ☒ The allowed claim(s) is/are 1, 4-11, 13-21, 28, and 31-39, which have been renumbered.
3. ☒ The drawings filed on 30 April 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                    |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Owais Siddiqui on 03/02/05, and with Bing Ai Reg. No. 43,312, on 03/07/05.

In the claims:

Replace claim 1 with --A computer implemented method comprising:

assigning a state to a plurality of control bits, wherein the state is a first state when a first debugging mode is to be selected by the invocation of a first debug handler, and wherein the state is a second state when a second debugging mode is to be selected by the invocation of a second debug handler, and wherein the state is a third state when one of a plurality of debugging modes is to be selected as a function of a current operating mode of a processor; and

invoking one of a plurality of debug handlers based on the state of the control bits, wherein the plurality of debug handlers includes the first debug handler and the second debug handler, and wherein the first debug handler comprises an emulation service routine and wherein the second debug handler comprises an exception handler.--.

Claim 4, line 2, change "selecting the debugging mode comprises" to --selecting the debugging mode as a function of the current operating mode of the processor comprises--.

Replace claim 5 with --A method comprising:

receiving an instruction;

receiving a signal;

selecting a mode of debugging as a function of the signal, wherein selecting the debugging mode comprises selecting a first debugging mode using a first debug handler when the signal is a first signal, selecting a second debugging mode using a second debug handler when the signal is a second signal, and selecting the debugging mode as a function of a current operating mode of a processor when the signal is a third signal;

invoking one of plurality of debug handlers, wherein the plurality of debug handlers includes the first debug handler and the second debug handler; and

executing the instruction.--.

Claim 11, line 11, change “wherein the processor is adapted to select one of a plurality of debugging modes as a function of the at least one control bit.” to --wherein the processor is adapted to assign the state of the at least one control bit, wherein the state is a first state when a first debugging mode is to be selected by the invocation of a first debug handler, and wherein the state is a second state when a second debugging mode is to be selected by the invocation of a second debug handler, and wherein the state is a third state when one of a plurality of debugging modes is to be selected as a function of a current operating mode of a processor.--

Art Unit: 2183

Claim 17, line 7, change “comprises selecting a first debugging mode when the signal is a first signal, selecting a second debugging mode when the signal is a second signal” to --comprises selecting a first debugging mode using a first debug handler when the signal is a first signal, selecting a second debugging mode using a second debug handler when the signal is a second signal--.

Claim 17, last line, change “wherein the plurality of debug handlers includes a first debug handler and a second debug handler” to --wherein the plurality of debug handlers includes the first debug handler and the second debug handler--.

Replace claim 34 with --The device of claim 11, wherein the processor is further adapted to select the first debugging mode when the current operating mode comprises a supervisor mode and to select the second operating mode when the current operating mode comprises a user mode.--

***Allowable Subject Matter***

2. The following is an examiner’s statement of reasons for allowance: Hohl has taught selecting one of a plurality of debugging modes based on an operating mode, and invoking one of a plurality of debugging handlers, where the plurality of debugging handlers includes an emulation service routine as a first debug handler and an exception handler as a second debug handler. Hohl has also taught having a supervisor and a normal, user, operating mode of a

Art Unit: 2183

processor. However, Hohl, and the prior art mentioned in the previous Office Actions, have not taught individually, or in combination, selecting a mode of debugging as a function of the signal, wherein selecting the debugging mode comprises selecting a first debugging mode using a first debug handler when the signal is a first signal, selecting a second debugging mode using a second debug handler when the signal is a second signal, and selecting the debugging mode as a function of a current operating mode of a processor when the signal is a third signal.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles A Harkness whose telephone number is 571-272-4167. The examiner can normally be reached on 9Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Chan can be reached on 571-272-4162. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2183

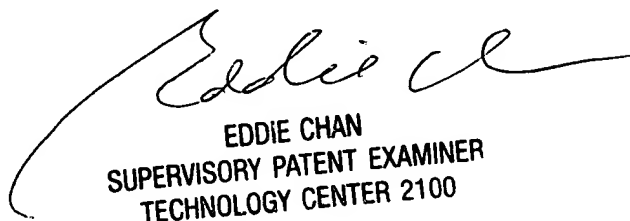
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Charles Harkness

Examiner

Art Unit 2183

March 3, 2005



EDDIE CHAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100